

Emergency Action Plans for Dams in Texas

EAP Overview and Question and Answer Session

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TCEQ Dam Safety Program

2014 Dam Safety Workshop



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ON ENVIRONMENTAL QUALITY

Objectives

- Overview of an EAP
 - Contents
 - Requirements
 - Rules and Guidelines
- Question and Answer Session
 - Frequently Asked Questions
 - Audience Participation



Why Talk About Dams? We're In a Drought!

- Historically, droughts are ended by floods
- During droughts, dams can dry out and create problems
- Drought ridden Florida received about 21 inches of rain in 1 day causing mass flooding
- Good time to get affairs in order (i.e. EAPs, inspections, etc)



What is an EAP?

- Formal document that identifies potential emergency conditions and specifies actions to be followed to minimize loss of life and property damage

Who Needs an EAP?

- All high and significant hazard dams are required to have an EAP
- Significant hazard dams that are exempt are not required to have an EAP



Exemption Criteria

Effective September 1, 2013

- Private Ownership
- Maximum Impoundment Capacity Less Than 500 acre-feet
- Classified as Low or Significant Hazard
- Located in a County With a Population Less than 350,000 (as per 2010 census)
- Located Outside the Corporate Limits of a Municipality

All 5 criteria must be met in order to be exempt. Dam owners will still have to comply with O&M requirements.
There is no exemption expiration date.



Components of an EAP

- Cover and Title Page
- Table of Contents
- Approval and Implementation Page
 - Notification Flowchart
 - Purpose
 - Project (Dam) Description
 - Responsibilities
 - Possible Emergency Conditions
 - Preventive Actions
 - Supplies and Resources
 - Inundation Map
 - Implementation



Approval and Implementation Page

- An attempt should be made to have the local emergency manager review your EAP and provide feedback as necessary.
- If your dam is located inside a city limit, default to the city emergency management coordinator. If your dam is located outside a city limit, default to the county emergency management coordinator.



Approval and Implementation Page

**APPROVAL AND IMPLEMENTATION
EMERGENCY ACTION PLAN
[NAME] DAM, [TX#####]**

This Emergency Action Plan is hereby approved. This plan is effective immediately and supersedes all previous editions.

[Name and Title of Appropriate Manager for Owner]

Date

I have received a copy of this Emergency Action Plan and concur with the notification procedures.

[Name and Title of Emergency management Coordinator]

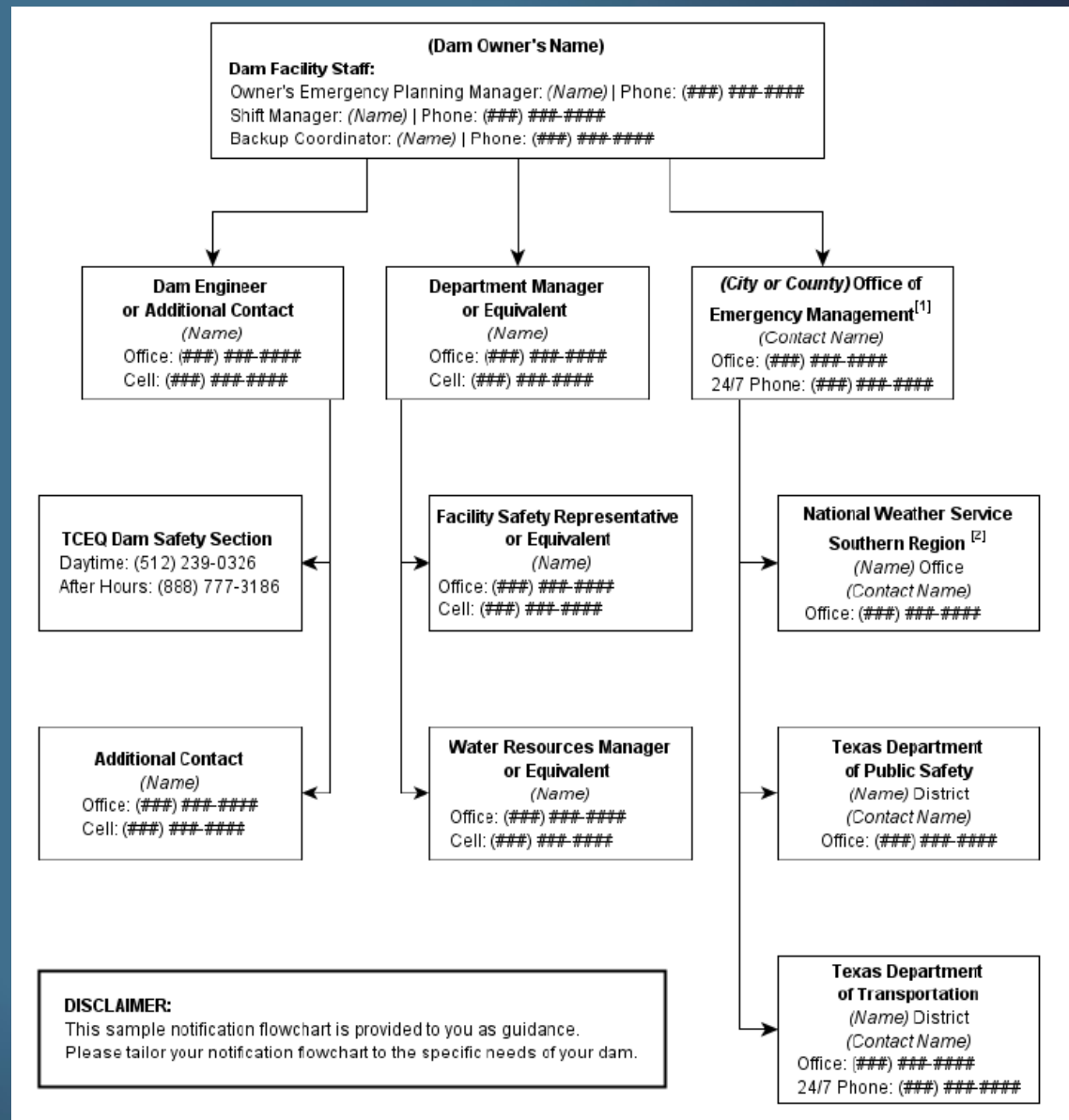
Date

- It is preferred that the wording not be changed; however, it could be changed after consultation with TCEQ
- EAP will not be accepted without signatures



Notification Flowchart

- Delegate who calls who and when
- Different flowcharts for different scenarios (watch condition, possible dam failure, imminent dam failure)
- Some telephone numbers are different from what is in the Guidelines

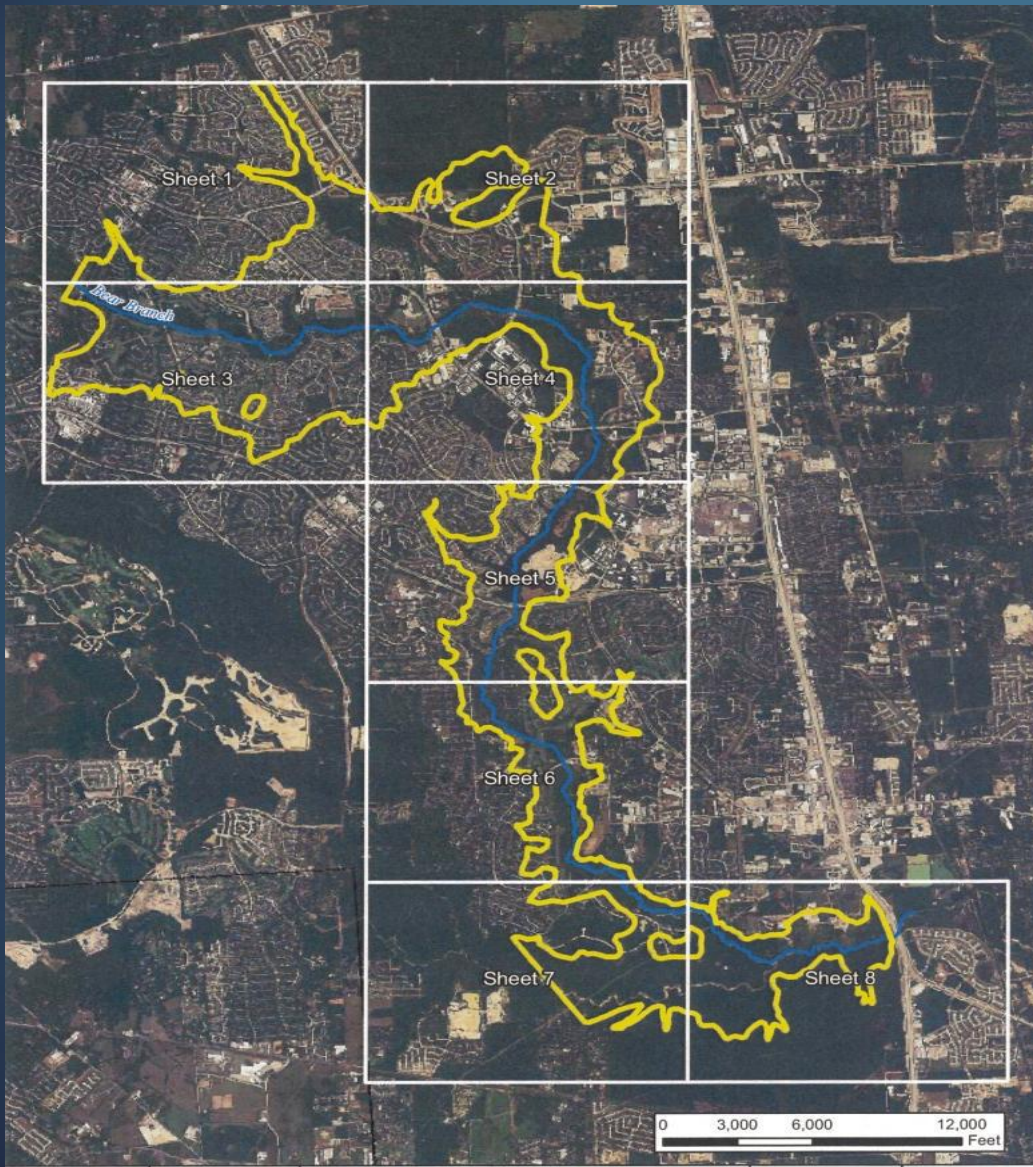


Inundation Maps

- Depicts area that will flood if the dam fails
- Officials who will be evacuating downstream businesses and residents need to know who to evacuate and when
- Detailed or Generalized Inundation Maps



Detailed Inundation Map

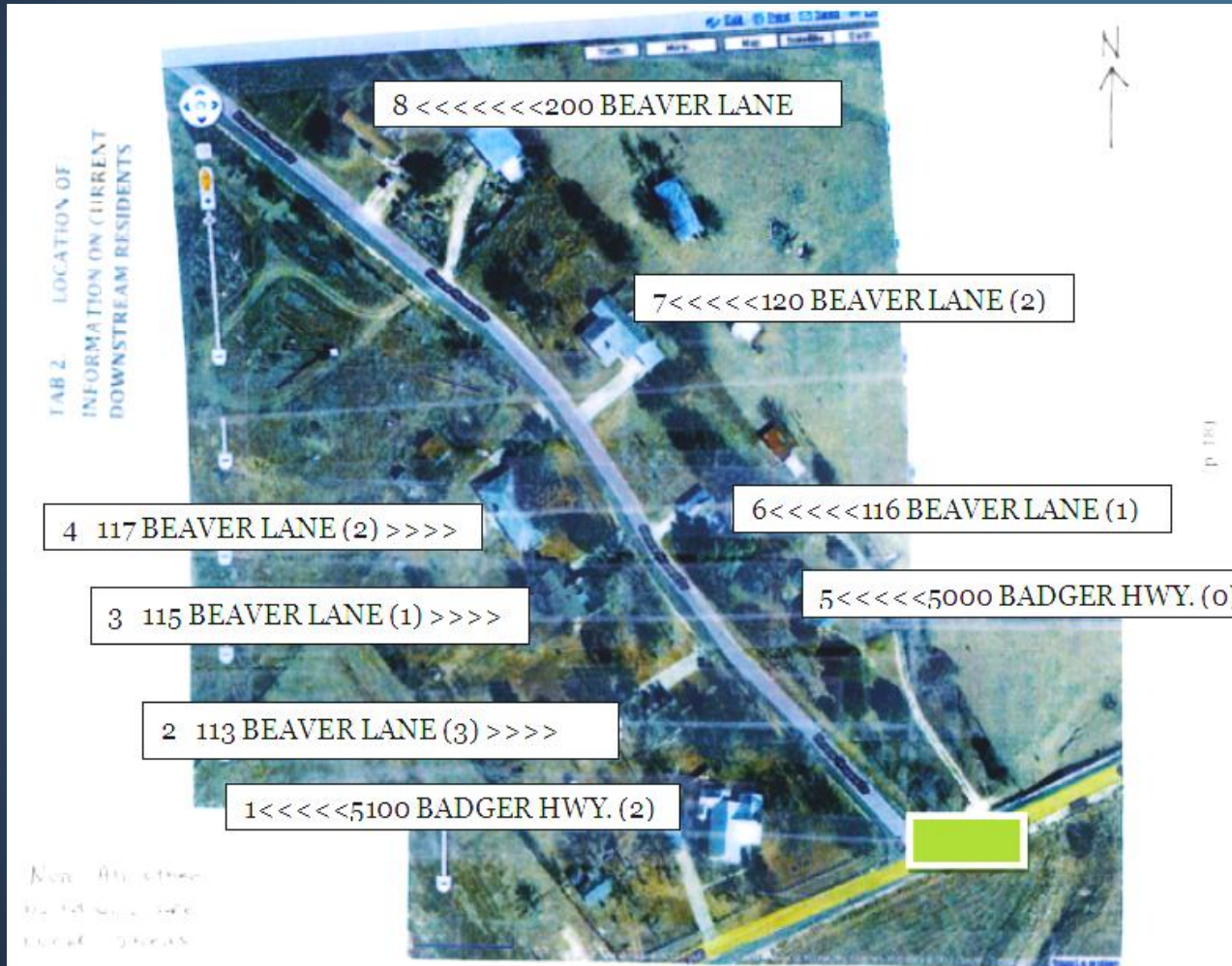


❖ Map prepared by Texas licensed professional engineer



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Generalized Inundation Map



Governing Rules and Guidelines

Title 30 Texas
Administrative Code
Chapter 299
Dams and Reservoirs
(§299.61)

*Guidelines for Developing
Emergency Action Plans
for Dams in Texas
(GI-394)*



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What Do They Say?

- Review your EAP once a year. Submit to the TCEQ Dam Safety Program any updated pages or a letter stating there were no changes
 - Remember to check for up-to-date names and contact information for the flowcharts
 - Do not need to send in entire EAP again, only the updated sheets
 - Extent of review depends on size of the dam and complexity of downstream development
- Perform a Tabletop Exercise (at a minimum) every 5 years



Annual Updates

- Check Notification Flowchart for up to date names and contact information
 - i.e. NWS contact map recently updated
 - Don't forget downstream residents
 - Check for anything else that needs to be updated
 - Worksheets provided in EAP Template in Guidelines
- ❖ Provide only the updated sheets, owner is not required to resubmit entire EAP



Tabletop Exercise

- Informal meeting of entities from notification flowchart.
- A scenario is given and entities discuss their roles and responsibilities.
- Good time to update Notification Flowchart for annual update.
- Choose who will facilitate and invite as many people from Notification Flowchart as possible.
- Notify TCEQ when exercise is happening. We will attempt to attend.

EAP Project

- TCEQ Dam Safety is going through records to verify the status of EAP's.
 - Have contacted owners with no EAP on file
 - Will verify we have EAP in-house if inventory says we do
 - Will be contacting owners with
 - Overdue extensions
 - Outstanding comments



QUESTION AND ANSWER SESSION



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To Get Started...



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Writing Your EAP Question

- Can an owner change the wording of the template from TCEQ EAP Guidelines?



Writing Your EAP Answer

- Yes! Please feel free to revise any part of the template that is necessary for your dam. EAP's should be very site specific. We realize that every dam is different and your EAP should reflect that.

Ensure that the EAP maintains the minimum requirements.



EAP Review Question

- Can an owner send you a signed approval and implementation page after TCEQ's review and acceptance?



EAP Review Answer

- No. TCEQ Dam Safety will only accept EAP's that include a signed approval and implementation page.



Submitting Your EAP Question

- Who should an owner send their EAP to?
- Should an owner send the EAP as hardcopy or electronically?



Submitting Your EAP Answer

- You may send your EAP either to the reviewer (if you are submitting revisions), Megan Dutton, or Warren Samuelson. TCEQ Dam Safety address is as follows:

P.O. Box 13087, Mail Code 177
Austin, Texas 78711-13087

- You may submit either an electronic or hardcopy EAP. Just note that Dam Safety keeps hardcopy records of EAP and the correspondence.



EAP Due Date Question

- If an owner does not have an EAP on file yet, how long do they have to turn one in to TCEQ?



EAP Due Date Answer

- Usually a dam inspection is performed every 5 years. Something will be mentioned in the report with regard to the EAP. A due date may be included with the report. Otherwise, you may call or email the Dam Safety Program and we will work with you on getting an EAP submitted in a timely manner.



EAP Acceptance Question

- An owner has an acceptance letter but TCEQ now says their EAP is not acceptable. Please advise.
- An owner has a letter that says their EAP is 'in compliance with TAC Chapter 299...' but TCEQ now says their EAP is not acceptable. Please advise.



EAP Acceptance Answer

- Around 2009 and 2010 some EAP comment letters were sent out that began with ‘...your EAP is now in compliance with TAC Chapter 299...’ and some specifically stated that the EAP had been accepted. If further in the letter there were comments listed, this letter was not a acceptance letter. If you have one of these letters, make sure and update the EAP so that it complies with the new Guidelines. Contact TCEQ if you have any questions or want to find out if your plan was accepted or not.



Hazard Reclassification Question

- An owner's dam has been upgraded to significant or high hazard (previously low hazard). Will TCEQ tell them they need an EAP?



Hazard Reclassification

Answer

- Yes. TCEQ has been looking at dams whose hazards possibly need to be upgraded. If your dam is one of these, you will be notified by letter or a dam inspection will be performed and you will be notified through the report.



Tabletop Exercise Question

- When is the first Tabletop Exercise due?



Tabletop Exercise

Answer

- The first Tabletop Exercise is due within 5 years of the acceptance date. Please notify the Dam Safety Section when one is performed.



Public Disclosure Question

- Should an owner notify all downstream residents they are in the breach zone?



Public Disclosure Answer

- It is not a requirement to notify downstream residents and businesses they are in an inundation zone; however, it is encouraged. It is recognized there is a security issue but it is also in the owner's best interest to establish lines of communication before a failure event.

If the owner is asked a question by a downstream resident or business, they are not required to answer, but again they are encouraged.



Disclosure to Officials Question

- Should you provide inundation maps to emergency managers?



Disclosure to Officials

Answer

- This is a necessity. Emergency Managers and public officials are the entities that are responsible for evacuations so it is imperative that they have access to the maps. This ensures they know who to evacuate and when. It also lets them know if they need to use alternate routes or if they need to shut down roadways.

In addition, the EMC should not be signing the EAP without seeing the inundation maps.



Social Media Question

- Who will respond to the media?
- How will they deal with social media in the event of an emergency?



Social Media

Answer

- In the EAP, designate 1 person to respond to the media. Be aware the media will be involved in a failure situation.
 - With websites such as Facebook and Twitter, anticipate (for larger structures that fail) information being shared. May be true, may not be.
- ❖ Media and Social Media primarily a concern for larger structures



The Floor is Open....



Contact Information

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